STATE OF CALIFORNIA
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Office of the Secretary
Federal Communications Commission
1919 M Street, N.W.
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AMENDMENTS OF PART 90 OF THE COMMISSION'S RULES TO ADOPT REGULATIONS FOR AUTOMATIC VEHICLE MONITORING (AVM) SYSTEMS (PR DOCKET NO. 93-61)

The California Air Resources Board (Board) is responding to the Federal Communications Commission's (FCC) request for comments on its Notice of Proposed Rule Making (NPRM) pertaining to AVM communications systems, as published on April 20, 1993, at 58 FR 21276-77.

The Board is the state agency responsible for bringing California into compliance with state and federal air quality standards. Among its various activities, the Board adopts and enforces emission standards applicable to new and in-use motor vehicles sold and registered in California. One of our most important responsibilities is to set emission standards and provide technical support for the vehicle inspection and maintenance (I/M) program in the state, under which in-use vehicles are subject to a biennial "smog check" inspection to verify that their emission control equipment is operating properly.

Primarily through improved equipment, mechanic training and enforcement, the California I/M program has experienced better results in reducing in-use vehicle emissions over the past several years, but further emission reductions are needed to meet California statutory objectives. Also, in November of last year, the federal Environmental Protection Agency (EPA) adopted regulations requiring all states to implement an "enhanced" I/M program (40 CFR Part 51; published November 5, 1992, at 57 FR 52950 et seq.). One requirement in the EPA regulations is that states must provide for annual on-road testing of at least 20,000 vehicles in California. To meet California's own clean air requirements, as well as the EPA on-road testing requirement, the Board is looking into a number of technologies for identifying emissions-related defects in on-road vehicles. Use of Radio Frequency (RF) devices is one of the technologies under consideration.

Under both the federal and California vehicle emission control programs, newer vehicles are required to have on-board diagnostic (OBD) systems that electronically monitor and record the status of key emission control components and functions such as catalysts, fuel delivery systems

and evaporative control systems. Under the Board's revised OBD regulations, which will come into full effect beginning with 1996 model-year vehicles, ten specific monitoring requirements must be met. If the OBD system detects a malfunction, a dashboard light must come on and a "fault code" must be stored in the OBD system memory. The fault code can be manually accessed by an inspector at an I/M inspection station or a garage mechanic, but can also be accessed by a remote RF signal.

The Board is presently field-testing a commercially developed prototype spread spectrum radio system to provide remote access to OBD fault codes. The system would use a small 10 milliwatt on-board transponder to send OBD fault code information to a 100 milliwatt transceiver located on the roadside or in a vehicle. The system would operate in the 902-928 MHz band, and within the maximum power specifications, designated for unlicensed spread spectrum equipment by the FCC (47 CFR 15.247). Upgrading the transceiver to broadcast a coherent signal at up to 4 watts power, which would require licensing of the receiver, is also being considered as an alternative. The Board is investigating this system because it offers a means to accurately and cost-effectively read the status of emission control systems on a large number of vehicles traveling at high speed on multi-lane roadways. If successful, we will consider using this technology extensively in urbanized areas to help meet both the state and EPA objectives for improving the state's I/M program.

In Paragraph 24 of the above-referenced NPRM, the issue of possible interference with licensed AVM transmissions caused by spread spectrum devices is raised. We hope that the FCC can resolve this interference issue in a manner that will allow California to make effective use of the RF system described above. Extensive testing of the Board's prototype system done by the equipment vendor (Hughes Electronics) indicates that interference with AVM signals is not occurring. According to the NPRM, one possible solution to the interference issue would be a significant setback to the Board's efforts to monitor on-road emissions, because of our need to employ inexpensive unlicensed RF technology on a widespread basis. We urge the FCC to develop a final AVM regulation that continues to allow the use of spread spectrum equipment, and other low-power equipment, in applications that will serve our state and federal I/M mandates.

If the FCC would like to discuss this matter with us further, please contact the undersigned either in writing or by telephone at (916) 322-2892.

Sincerely,

Tom Cackette
Chief Deputy Executive Officer